

PCTWORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : F42B 3/195, 3/12, 3/14, 3/16, C06C 7/02	A1	(11) International Publication Number: WO 00/26603 (43) International Publication Date: 11 May 2000 (11.05.00)
(21) International Application Number: PCT/AU99/00940 (22) International Filing Date: 29 October 1999 (29.10.99) (30) Priority Data: 2,252,353 4 November 1998 (04.11.98) CA PQ 2315 19 August 1999 (19.08.99) AU (71) Applicant (for all designated States except US): ORICA EXPLOSIVES TECHNOLOGY PTY. LTD. [AU/AU]; 1 Nicholson Street, Melbourne, VIC 3000 (AU). (72) Inventors; and (75) Inventors/Applicants (for US only): COOPER, John [GB/GB]; 11 Lamford Drive, Ayr, Scotland KA7 4DE (GB). SUT- TON, David, Proven [GB/GB]; 8 Peacocks Close, Stokesley, North Yorkshire TS9 5QD (GB). CHAN, Sek, Kwan [CA/CA]; 4076 Kuchiran Street, Pierrefonds, Quebec H9H 4A9 (CA). (74) Agents: HUNTSMAN, Peter, Harold et al.; Davies Collison Cave, 1 Little Collins Street, Melbourne, VIC 3000 (AU).	(81) Designated States: AU, CA, CN, US, ZA, ZW. Published <i>With international search report.</i>	

(54) Title: NON-PRIMARY DETONATORS

(57) Abstract

Deflagration to detonation transition (DDT) detonators (1) are provided which are essentially free from primary explosives. Detonators (1) utilise an intimate mixture (5) of a large particle sized porous, powdered explosive such as PETN, and a smaller particle size, high-burn-rate, pressurising initiator such as a mixture of potassium picrate and potassium perchlorate. The smaller particle sized pressurising initiator is located within the interstitial spaces of the larger powdered explosive. Mixture (5) is able to reliably initiate an adjacent transition portion (4), or base charge (2) while reducing the need for heavy confinement. Mixture (5) can also be used directly in surface detonator applications. Improved performance and safety during manufacture of detonators is achieved.

